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Ser Gln Asp Ser Arg Pro Arg Ser Trp Cys Leu Arg Thr Val Cys Asn
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Pro Trp Phe Glu Arg Val Ser Met Leu Val Ile Leu Leu Asn Cys Val
                 85                  90                  95

Thr Leu Gly Met Phe Arg Pro Cys Glu Asp Ile Ala Cys Asp Ser Gln
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Arg Cys Arg Ile Leu Gln Ala Phe Asp Asp Phe Ile Phe Ala Phe Phe
        115                 120                 125

Ala Val Glu Met Val Val Lys Met Val Ala Leu Gly Ile Phe Gly Lys
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Lys Cys Tyr Leu Gly Asp Thr Trp Asn Arg Leu Asp Phe Phe Ile Val
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Ile Ala Gly Met Leu Glu Tyr Ser Leu Asp Leu Gln Asn Val Ser Phe
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Ser Ala Val Arg Thr Val Arg Val Leu Arg Pro Leu Arg Ala Ile Asn
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Arg Val Pro Ser Met Arg Ile Leu Val Thr Leu Leu Leu Asp Thr Leu
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a' cont.

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Cys Phe Leu Pro Glu Asn Phe Ser Leu Pro Leu Ser Val Asp Leu Glu
                245                 250                 255

Pro Tyr Tyr Gln Thr Glu Asn Glu Asp Glu Ser Pro Phe Ile Cys Ser
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Gln Pro Arg Glu Asn Gly Met Arg Ser Cys Arg Ser Val Pro Thr Leu
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Arg Gly Glu Gly Gly Gly Gly Pro Pro Cys Ser Leu Asp Tyr Glu Thr
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Thr Asn Cys Ser Ala Gly Glu His Asn Pro Phe Lys Gly Ala Ile Asn
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Phe Asp Asn Ile Gly Tyr Ala Trp Ile Ala Ile Phe Gln Val Ile Thr
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Leu Glu Gly Trp Val Asp Ile Met Tyr Phe Val Met Asp Ala His Ser
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Phe Tyr Asn Phe Ile Tyr Phe Ile Leu Leu Ile Ile Val Gly Ser Phe
    370                 375                 380

Phe Met Ile Asn Leu Cys Leu Val Val Ile Ala Thr Gln Phe Ser Glu
385                 390                 395                 400

Thr Lys Gln Arg Glu Ser Gln Leu Met Arg Glu Gln Arg Val Arg Phe
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Arg Arg Leu Ala Gln Val Ser Arg Ala Ile Gly Val Arg Ala Gly Leu
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515 520 525

Ser Arg Arg Leu Met Leu Pro Pro Pro Ser Thr Pro Thr Pro Ser Gly
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Gly Pro Pro Arg Gly Ala Glu Ser Val His Ser Phe Tyr His Ala Asp
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Cys His Leu Glu Pro Val Arg Cys Gln Ala Pro Pro Pro Arg Cys Pro
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Val His Thr Ser Pro Pro Pro Glu Ile Leu Lys Asp Lys Ala Leu Val
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Glu Val Ala Pro Ser Pro Gly Pro Pro Thr Leu Thr Ser Phe Asn Ile
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Pro Pro Gly Pro Phe Ser Ser Met His Lys Leu Leu Glu Thr Gln Ser
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Asp Ser Glu Ala Val Tyr Glu Phe Thr Gln Asp Ala Gln His Ser Asp
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Leu Arg Asp Pro His Ser Arg Arg Arg Gln Arg Ser Leu Gly Pro Asp
705 710 715 720

A' Cont.

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725 730 735

Phe Arg Lys Ile Val Asp Ser Lys Tyr Phe Gly Arg Gly Ile Met Ile
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Ala Ile Leu Val Asn Thr Leu Ser Met Gly Ile Glu Tyr His Glu Gln
755 760 765

Pro Glu Glu Leu Thr Asn Ala Leu Glu Ile Ser Asn Ile Val Phe Thr
770 775 780

Ser Leu Phe Ala Leu Glu Met Leu Leu Lys Leu Leu Val Tyr Gly Pro
785 790 795 800

Phe Gly Tyr Ile Lys Asn Pro Tyr Asn Ile Phe Asp Gly Val Ile Val
805 810 815

Val Ile Ser Val Trp Glu Ile Val Gly Gln Gln Gly Gly Gly Leu Ser
820 825 830

Val Leu Arg Thr Phe Arg Leu Met Arg Val Leu Lys Leu Val Arg Phe
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Leu Pro Ala Leu Gln Arg Gln Leu Val Val Leu Met Lys Thr Met Asp
850 855 860

Asn Val Ala Thr Phe Cys Met Leu Leu Met Leu Phe Ile Phe Ile Phe
865 870 875 880

Ser Ile Leu Gly Met His Leu Phe Gly Cys Lys Phe Ala Ser Glu Arg
885 890 895

Asp Gly Asp Thr Leu Pro Asp Arg Lys Asn Phe Asp Ser Leu Leu Trp
900 905 910

Ala Ile Val Thr Val Phe Gln Ile Leu Thr Gln Glu Asp Trp Asn Lys
915 920 925

Val Leu Tyr Asn Gly Met Ala Ser Thr Ser Ser Trp Ala Ala Leu Tyr
930 935 940

Phe Ile Ala Leu Met Thr Phe Gly Asn Tyr Val Leu Phe Asn Leu Leu
945 950 955 960

Val Ala Ile Leu Val Glu Gly Phe Gln Ala Glu Glu Ile Gly Lys Arg
965 970 975

a! cont.

Glu Asp Ala Ser Gly Gln Leu Ser Cys Ile Gln Leu Pro Val Asn Ser
980 985 990

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995 1000 1005

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Ile Ile His Thr Ala Ala Thr Pro Met Ser Leu Pro Lys Ser Ser Ser
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Thr Gly Val Gly Glu Ala Leu Gly Ser Gly Ser Arg Arg Thr Ser Ser
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Ser Gly Ser Ala Glu Pro Gly Ala Ala His His Glu Met Lys Ser Pro
1075 1080 1085

Pro Ser Ala Arg Ser Ser Pro His Ser Pro Trp Ser Ala Ala Ser Ser
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Trp Thr Ser Arg Arg Ser Ser Arg Asn Ser Leu Gly Arg Ala Pro Ser
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Leu Lys Arg Arg Ser Pro Ser Gly Glu Arg Arg Ser Leu Leu Ser Gly
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Leu His Arg Thr Ala Ser Gly Arg Ser Ser Ala Ser Glu His Gln Asp
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Cys Asn Gly Lys Ser Ala Ser Gly Arg Leu Ala Arg Thr Leu Arg Thr
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Asp Asp Pro Gln Leu Asp Gly Asp Asp Asp Asn Asp Glu Gly Asn Leu
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a1 cont.

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Asp His Val Val Leu Val Ile Ile Phe Leu Asn Cys Ile Thr Ile Ala
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Met Glu Arg Pro Lys Ile Asp Pro His Ser Ala Glu Arg Ile Phe Leu
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Thr Leu Ser Asn Tyr Ile Phe Thr Ala Val Phe Leu Ala Glu Met Thr
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Val Lys Val Val Ala Leu Gly Trp Cys Phe Gly Glu Gln Ala Tyr Leu
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Arg Ser Ser Trp Asn Val Leu Asp Gly Leu Leu Val Leu Ile Ser Val
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Ile Asp Ile Leu Val Ser Met Val Ser Asp Ser Gly Thr Lys Ile Leu
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Gly Met Leu Arg Val Leu Arg Leu Leu Arg Thr Leu Arg Pro Leu Arg
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Val Ile Ser Arg Ala Gln Gly Leu Lys Leu Val Val Glu Thr Leu Met
1395 1400 1405

a' cont.

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Cys Ala Glu Ala Ser Tyr Arg Trp Val Arg His Lys Tyr Asn Phe Asp
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Asn Leu Gly Gln Ala Leu Met Ser Leu Phe Val Leu Ala Ser Lys Asp
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Arg Phe Arg Leu Leu Val His His Leu Cys Thr Ser His Tyr Leu Asp
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Asn Tyr Ile Phe Thr Val Ile Phe Val Phe Glu Ser Val Phe Lys Leu
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Val Gly Met Arg Ala Leu Leu Asp Thr Val Met Gln Ala Leu Pro Gln
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1860 1865 1870

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1875 1880 1885

Gly Ser Pro Phe Leu Trp Pro Gly Val Glu Gly Val Asn Ser Pro Asp
1890 1895 1900

Ser Pro Lys Pro Gly Ala Pro His Thr Thr Ala His Ile Gly Ala Ala
1905 1910 1915 1920

a' Cont.

Ser Gly Phe Ser Leu Glu His Pro Thr Met Val Pro His Pro Glu Glu
1925 1930 1935

Val Pro Val Pro Leu Gly Pro Asp Leu Leu Thr Val Arg Lys Ser Gly
1940 1945 1950

Val Ser Arg Thr His Ser Leu Pro Asn Asp Ser Tyr Met Cys Arg Asn
1955 1960 1965

Gly Ser Thr Ala Glu Arg Ser Leu Gly His Arg Gly Trp Gly Leu Pro
1970 1975 1980

Lys Ala Gln Ser Gly Ser Ile Leu Ser Val His Ser Gln Pro Ala Asp
1985 1990 1995 2000

Thr Ser Cys Ile Leu Gln Leu Pro Lys Asp Val His Tyr Leu Leu Gln
2005 2010 2015

Pro His Gly Ala Pro Thr Trp Gly Ala Ile Pro Lys Leu Pro Pro Pro
2020 2025 2030

Gly Arg Ser Pro Leu Ala Gln Arg Pro Leu Arg Arg Gln Ala Ala Ile
2035 2040 2045

Arg Thr Asp Ser Leu Asp Val Gln Gly Leu Gly Ser Arg Glu Asp Leu
2050 2055 2060

Leu Ser Glu Val Ser Gly Pro Ser Cys Pro Leu Thr Arg Ser Ser Ser
2065 2070 2075 2080

Phe Trp Gly Gly Ser Ser Ile Gln Val Gln Gln Arg Ser Gly Ile Gln
2085 2090 2095

Ser Lys Val Ser Lys His Ile Arg Leu Pro Ala Pro Cys Pro Gly Leu
2100 2105 2110

Glu Pro Ser Trp Ala Lys Asp Pro Pro Glu Thr Arg Ser Ser Leu Glu
2115 2120 2125

Leu Asp Thr Glu Leu Ser Trp Ile Ser Gly Asp Leu Leu Pro Ser Ser
2130 2135 2140

Gln Glu Glu Pro Leu Ser Pro Arg Asp Leu Lys Lys Cys Tyr Ser Val
2145 2150 2155 2160

Glu Thr Gln Ser Cys Arg Arg Arg Pro Gly Ser Trp Leu Asp Glu Gln
2165 2170 2175

Arg Arg His Ser Ile Ala Val Ser Cys Leu Asp Ser Gly Ser Gln Pro
2180 2185 2190

Arg Leu Cys Pro Ser Pro Ser Ser Leu Gly Gly Gln Pro Leu Gly Gly
2195 2200 2205

Pro Gly Ser Arg Pro Lys Lys Lys Leu Ser Pro Pro Ser Ile Ser Ile
2210 2215 2220

Asp Pro Pro Glu Ser Gln Gly Ser Arg Pro Pro Cys Ser Pro Gly Val
2225 2230 2235 2240

Cys Leu Arg Arg Arg Ala Pro Ala Ser Asp Ser Lys Asp Pro Ser Val
2245 2250 2255

a' cont.

Ser Ser Pro Leu Asp Ser Thr Ala Ala Ser Pro Ser Pro Lys Lys Asp
2260 2265 2270

Thr Leu Ser Leu Ser Gly Leu Ser Ser Asp Pro Thr Asp Met Asp Pro
2275 2280 2285

Val Leu Pro Thr Leu Pro His His Leu Ser Pro Pro Gly Ala Asp Pro
2290 2295 2300

Ser Ser Ala Ser Trp Ala Ala Phe Leu Lys Ser Pro Thr Ala Ala Ser
2305 2310 2315 2320

Ser His Glu Ala Pro His Leu Pro Ser Ser Val Ala Gly Gly Asp Asp
2325 2330 2335

Glu Gln Asn Phe Arg Arg Val Asp Leu Lys Arg Thr Gln Pro Trp Ser
2340 2345 2350

Pro Cys Leu Arg Glu Glu Gly Lys Gly Glu Ser Pro Val Trp Pro Arg
2355 2360 2365

Leu Pro Thr Pro Gly Ala
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a1 cont.

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A1 Cont.

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a' Cont.

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Ser Glu Gly Leu Arg Ser Pro Leu Phe Gly Pro Pro Gly Ala Pro Ala
35 40 45

Gly Gln Arg Met Asp Glu Glu Glu Asp Gly Ala Gly Ala Glu Glu Ser
50 55 60

Gly Gln Pro Arg Ser Phe Thr Gln Leu Asn Asp Leu Ser Gly Ala Gly
65 70 75 80

Gly Arg Gln Gly Pro Gly Ser Thr Glu Lys Asp Pro Gly Ser Ala Asp
85 90 95

Ser Glu Ala Glu Gly Leu Pro Tyr Pro Ala Leu Ala Pro Val Val Phe
100 105 110

Phe Tyr Leu Ser Gln Asp Ser Arg Pro Arg Ser Trp Cys Leu Arg Thr
115 120 125

Val Cys Asn Pro Trp Phe Glu Arg Val Ser Met Leu Val Ile Leu Leu
130 135 140

Asn Cys Val Thr Leu Gly Met Phe Arg Pro Cys Glu Asp Ile Ala Cys
145 150 155 160

a1 Cont.

Asp Ser Gln Arg Cys Arg Ile Leu Gln Ala Phe Asp Asp Phe Ile Phe
165 170 175

Ala Phe Phe Ala Val Glu Met Val Val Lys Met Val Ala Leu Gly Ile
180 185 190

Phe Gly Lys Lys Cys Tyr Leu Gly Asp Thr Trp Asn Arg Leu Asp Phe
195 200 205

Phe Ile Val Ile Ala Gly Met Leu Glu Tyr Ser Leu Asp Leu Gln Asn
210 215 220

Val Ser Phe Ser Ala Val Arg Thr Val Arg Val Leu Arg Pro Leu Arg
225 230 235 240

Ala Ile Asn Arg Val Pro Ser Met Arg Ile Leu Val Thr Leu Leu Leu
245 250 255

Asp Thr Leu Pro Met Leu Gly Asn Val Leu Leu Leu Cys Phe Phe Val
260 265 270

Phe Phe Ile Phe Gly Ile Val Gly Val Gln Leu Trp Ala Gly Leu Leu
275 280 285

Arg Asn Arg Cys Phe Leu Pro Glu Asn Phe Ser Leu Pro Leu Ser Val
290 295 300

Asp Leu Glu Pro Tyr Tyr Gln Thr Glu Asn Glu Asp Glu Ser Pro Phe
305 310 315 320

Ile Cys Ser Gln Pro Arg Glu Asn Gly Met Arg Ser Cys Arg Ser Val
325 330 335

Pro Thr Leu Arg Gly Glu Gly Gly Gly Gly Pro Pro Cys Ser Leu Asp
340 345 350

Tyr Glu Thr Tyr Asn Ser Ser Ser Asn Thr Thr Cys Val Asn Trp Asn
355 360 365

Gln Tyr Tyr Thr Asn Cys Ser Ala Gly Glu His Asn Pro Phe Lys Gly
370 375 380

Ala Ile Asn Phe Asp Asn Ile Gly Tyr Ala Trp Ile Ala Ile Phe Gln
385 390 395 400

Val Ile Thr Leu Glu Gly Trp Val Asp Ile Met Tyr Phe Val Met Asp
405 410 415

a1 cont

Ala His Ser Phe Tyr Asn Phe Ile Tyr Phe Ile Leu Leu Ile Ile Val
420 425 430

Gly Ser Phe Phe Met Ile Asn Leu Cys Leu Val Val Ile Ala Thr Gln
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Phe Ser Glu Thr Lys Gln Arg Glu Ser Gln Leu Met Arg Glu Gln Arg
450 455 460

Val Arg Phe Leu Ser Asn Ala Ser Thr Leu Ala Ser Phe Ser Glu Pro
465 470 475 480

Gly Ser Cys Tyr Glu Glu Leu Leu Lys Tyr Leu Val Tyr Ile Leu Arg
485 490 495

Lys Ala Ala Arg Arg Leu Ala Gln Val Ser Arg Ala Ile Gly Val Arg
500 505 510

Ala Gly Leu Leu Ser Ser Pro Val Ala Arg Ser Gly Gln Glu Pro Gln
515 520 525

Pro Ser Gly Ser Cys Thr Arg Ser His Arg Arg Leu Ser Val His His
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Leu Val His His His His His His His His His Tyr His Leu Gly Asn
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Gly Thr Leu Arg Val Pro Arg Ala Ser Pro Glu Ile Gln Asp Arg Asp
565 570 575

Ala Asn Gly Ser Arg Arg Leu Met Leu Pro Pro Pro Ser Thr Pro Thr
580 585 590

Pro Ser Gly Gly Pro Pro Arg Gly Ala Glu Ser Val His Ser Phe Tyr
595 600 605

His Ala Asp Cys His Leu Glu Pro Val Arg Cys Gln Ala Pro Pro Pro
610 615 620

Arg Cys Pro Ser Glu Ala Ser Gly Arg Thr Val Gly Ser Gly Lys Val
625 630 635 640

Tyr Pro Thr Val His Thr Ser Pro Pro Pro Glu Ile Leu Lys Asp Lys
645 650 655

Ala Leu Val Glu Val Ala Pro Ser Pro Gly Pro Pro Thr Leu Thr Ser
660 665 670

a' cont.

Phe Asn Ile Pro Pro Gly Pro Phe Ser Ser Met His Lys Leu Leu Glu
675 680 685

Thr Gln Ser Thr Gly Ala Cys His Ser Ser Cys Lys Ile Ser Ser Pro
690 695 700

Cys Ser Lys Ala Asp Ser Gly Ala Cys Gly Pro Asp Ser Cys Pro Tyr
705 710 715 720

Cys Ala Arg Thr Gly Ala Gly Glu Pro Glu Ser Ala Asp His Val Met
725 730 735

Pro Asp Ser Asp Ser Glu Ala Val Tyr Glu Phe Thr Gln Asp Ala Gln
740 745 750

His Ser Asp Leu Arg Asp Pro His Ser Arg Arg Arg Gln Arg Ser Leu
755 760 765

Gly Pro Asp Ala Glu Pro Ser Ser Val Leu Ala Phe Trp Arg Leu Ile
770 775 780

Cys Asp Thr Phe Arg Lys Ile Val Asp Ser Lys Tyr Phe Gly Arg Gly
785 790 795 800

Ile Met Ile Ala Ile Leu Val Asn Thr Leu Ser Met Gly Ile Glu Tyr
805 810 815

His Glu Gln Pro Glu Glu Leu Thr Asn Ala Leu Glu Ile Ser Asn Ile
820 825 830

Val Phe Thr Ser Leu Phe Ala Leu Glu Met Leu Leu Lys Leu Leu Val
835 840 845

Tyr Gly Pro Phe Gly Tyr Ile Lys Asn Pro Tyr Asn Ile Phe Asp Gly
850 855 860

Val Ile Val Val Ile Ser Val Trp Glu Ile Val Gly Gln Gln Gly Gly
865 870 875 880

Gly Leu Ser Val Leu Arg Thr Phe Arg Leu Met Arg Val Leu Lys Leu
885 890 895

Val Arg Phe Leu Pro Ala Leu Gln Arg Gln Leu Val Val Leu Met Lys
900 905 910

Thr Met Asp Asn Val Ala Thr Phe Cys Met Leu Leu Met Leu Phe Ile
915 920 925

a' cont.

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Ser Glu Arg Asp Gly Asp Thr Leu Pro Asp Arg Lys Asn Phe Asp Ser
945                 950                 955                 960

Leu Leu Trp Ala Ile Val Thr Val Phe Gln Ile Leu Thr Gln Glu Asp
                965                 970                 975

Trp Asn Lys Val Leu Tyr Asn Gly Met Ala Ser Thr Ser Ser Trp Ala
            980                 985                 990

Ala Leu Tyr Phe Ile Ala Leu Met Thr Phe Gly Asn Tyr Val Leu Phe
        995                1000                1005

Asn Leu Leu Val Ala Ile Leu Val Glu Gly Phe Gln Ala Glu Glu Ile
   1010                1015                1020

Gly Lys Arg Glu Asp Ala Ser Gly Gln Leu Ser Cys Ile Gln Leu Pro
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Val Asn Ser Gln Gly Gly Asp Ala Thr Lys Ser Glu Ser Glu Pro Asp
               1045                1050                1055

Phe Phe Ser Pro Ser Val Asp Gly Asp Gly Asp Arg Lys Lys Arg Leu
           1060                1065                1070

Ala Leu Val Ala Leu Gly Glu His Ala Glu Leu Arg Lys Ser Leu Leu
       1075                1080                1085

Pro Pro Leu Ile Ile His Thr Ala Ala Thr Pro Met Ser Leu Pro Lys
   1090                1095                1100

Ser Ser Ser Thr Gly Val Gly Glu Ala Leu Gly Ser Gly Ser Arg Arg
1105                1110                1115                1120

Thr Ser Ser Ser Gly Ser Ala Glu Pro Gly Ala Ala His His Glu Met
               1125                1130                1135

Lys Ser Pro Pro Ser Ala Arg Ser Ser Pro His Ser Pro Trp Ser Ala
           1140                1145                1150

Ala Ser Ser Trp Thr Ser Arg Arg Ser Ser Arg Asn Ser Leu Gly Arg
       1155                1160                1165

Ala Pro Ser Leu Lys Arg Arg Ser Pro Ser Gly Glu Arg Arg Ser Leu
   1170                1175                1180
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a1 cont.

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Leu Glu Arg Glu Ala Lys Ser Ser Phe Asp Leu Pro Asp Thr Leu Gln
1220 1225 1230

Val Pro Gly Leu His Arg Thr Ala Ser Gly Arg Ser Ser Ala Ser Glu
1235 1240 1245

His Gln Asp Cys Asn Gly Lys Ser Ala Ser Gly Arg Leu Ala Arg Thr
1250 1255 1260

Leu Arg Thr Asp Asp Pro Gln Leu Asp Gly Asp Asp Asp Asn Asp Glu
1265 1270 1275 1280

Gly Asn Leu Ser Lys Gly Glu Arg Ile Gln Ala Trp Val Arg Ser Arg
1285 1290 1295

Leu Pro Ala Cys Cys Arg Glu Arg Asp Ser Trp Ser Ala Tyr Ile Phe
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Pro Pro Gln Ser Arg Phe Arg Leu Leu Cys His Arg Ile Ile Thr His
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Lys Met Phe Asp His Val Val Leu Val Ile Ile Phe Leu Asn Cys Ile
1330 1335 1340

Thr Ile Ala Met Glu Arg Pro Lys Ile Asp Pro His Ser Ala Glu Arg
1345 1350 1355 1360

a' cont.

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1380 1385 1390

Ala Tyr Leu Arg Ser Ser Trp Asn Val Leu Asp Gly Leu Leu Val Leu
1395 1400 1405

Ile Ser Val Ile Asp Ile Leu Val Ser Met Val Ser Asp Ser Gly Thr
1410 1415 1420

Lys Ile Leu Gly Met Leu Arg Val Leu Arg Leu Leu Arg Thr Leu Arg
1425 1430 1435 1440

Pro Leu Arg Val Ile Ser Arg Ala Gln Gly Leu Lys Leu Val Val Glu
1445 1450 1455

Thr Leu Met Ser Ser Leu Lys Pro Ile Gly Asn Ile Val Val Ile Cys
1460 1465 1470

Cys Ala Phe Phe Ile Ile Phe Gly Ile Leu Gly Val Gln Leu Phe Lys
1475 1480 1485

Gly Lys Phe Phe Val Cys Gln Gly Glu Asp Thr Arg Asn Ile Thr Asn
1490 1495 1500

Lys Ser Asp Cys Ala Glu Ala Ser Tyr Arg Trp Val Arg His Lys Tyr
1505 1510 1515 1520

Asn Phe Asp Asn Leu Gly Gln Ala Leu Met Ser Leu Phe Val Leu Ala
1525 1530 1535

Ser Lys Asp Gly Trp Val Asp Ile Met Tyr Asp Gly Leu Asp Ala Val
1540 1545 1550

Gly Val Asp Gln Gln Pro Ile Met Asn His Asn Pro Trp Met Leu Leu
1555 1560 1565

Tyr Phe Ile Ser Phe Leu Leu Ile Val Ala Phe Phe Val Leu Asn Met
1570 1575 1580

Phe Val Gly Val Val Val Glu Asn Phe His Lys Cys Arg Gln His Gln
1585 1590 1595 1600

Glu Glu Glu Glu Ala Arg Arg Arg Glu Glu Lys Arg Leu Arg Arg Leu
1605 1610 1615

Glu Lys Lys Arg Arg Asn Leu Met Leu Asp Asp Val Ile Ala Ser Gly
1620 1625 1630

Ser Ser Ala Ser Ala Ala Ser Glu Ala Gln Cys Lys Pro Tyr Tyr Ser
1635 1640 1645

Asp Tyr Ser Arg Phe Arg Leu Leu Val His His Leu Cys Thr Ser His
1650 1655 1660

Tyr Leu Asp Leu Phe Ile Thr Gly Val Ile Gly Leu Asn Val Val Thr
1665 1670 1675 1680

Met Ala Met Glu His Tyr Gln Gln Pro Gln Ile Leu Asp Glu Ala Leu
1685 1690 1695

a1 cont.

Lys Ile Cys Asn Tyr Ile Phe Thr Val Ile Phe Val Phe Glu Ser Val
1700 1705 1710

Phe Lys Leu Val Ala Phe Gly Phe Arg Arg Phe Phe Gln Asp Arg Trp
1715 1720 1725

Asn Gln Leu Asp Leu Ala Ile Val Leu Leu Ser Ile Met Gly Ile Thr
1730 1735 1740

Leu Glu Glu Ile Glu Val Asn Ala Ser Leu Pro Ile Asn Pro Thr Ile
1745 1750 1755 1760

Ile Arg Ile Met Arg Val Leu Arg Ile Ala Arg Val Leu Lys Leu Leu
1765 1770 1775

Lys Met Ala Val Gly Met Arg Ala Leu Leu Asp Thr Val Met Gln Ala
1780 1785 1790

Leu Pro Gln Val Gly Asn Leu Gly Leu Leu Phe Met Leu Leu Phe Phe
1795 1800 1805

Ile Phe Ala Ala Leu Gly Val Glu Leu Phe Gly Asp Leu Glu Cys Asp
1810 1815 1820

Glu Thr His Pro Cys Glu Gly Leu Gly Arg His Ala Thr Phe Arg Asn
1825 1830 1835 1840

Phe Gly Met Ala Phe Leu Thr Leu Phe Arg Val Ser Thr Gly Asp Asn
1845 1850 1855

Trp Asn Gly Ile Met Lys Asp Thr Leu Arg Asp Cys Asp Gln Glu Ser
1860 1865 1870

a' cont.

Thr Cys Tyr Asn Thr Val Ile Ser Pro Ile Tyr Phe Val Ser Phe Val
1875 1880 1885

Leu Thr Ala Gln Phe Val Leu Val Asn Val Val Ile Ala Val Leu Met
1890 1895 1900

Lys His Leu Glu Glu Ser Asn Lys Glu Ala Lys Glu Glu Ala Glu Leu
1905 1910 1915 1920

Glu Ala Glu Leu Glu Leu Glu Met Lys Thr Leu Ser Pro Gln Pro His
1925 1930 1935

Ser Pro Leu Gly Ser Pro Phe Leu Trp Pro Gly Val Glu Gly Val Asn
1940 1945 1950

Ser Pro Asp Ser Pro Lys Pro Gly Ala Pro His Thr Thr Ala His Ile
1955 1960 1965

Gly Ala Ala Ser Gly Phe Ser Leu Glu His Pro Thr Met Val Pro His
1970 1975 1980

Pro Glu Glu Val Pro Val Pro Leu Gly Pro Asp Leu Leu Thr Val Arg
1985 1990 1995 2000

Lys Ser Gly Val Ser Arg Thr His Ser Leu Pro Asn Asp Ser Tyr Met
2005 2010 2015

Cys Arg Asn Gly Ser Thr Ala Glu Arg Ser Leu Gly His Arg Gly Trp
2020 2025 2030

Gly Leu Pro Lys Ala Gln Ser Gly Ser Ile Leu Ser Val His Ser Gln
2035 2040 2045

Pro Ala Asp Thr Ser Cys Ile Leu Gln Leu Pro Lys Asp Val His Tyr
2050 2055 2060

Leu Leu Gln Pro His Gly Ala Pro Thr Trp Gly Ala Ile Pro Lys Leu
2065 2070 2075 2080

Pro Pro Pro Gly Arg Ser Pro Leu Ala Gln Arg Pro Leu Arg Arg Gln
2085 2090 2095

Ala Ala Ile Arg Thr Asp Ser Leu Asp Val Gln Gly Leu Gly Ser Arg
2100 2105 2110

Glu Asp Leu Leu Ser Glu Val Ser Gly Pro Ser Cys Pro Leu Thr Arg
2115 2120 2125

a' cont.

Ser Ser Ser Phe Trp Gly Gly Ser Ser Ile Gln Val Gln Gln Arg Ser
2130 2135 2140

Gly Ile Gln Ser Lys Val Ser Lys His Ile Arg Leu Pro Ala Pro Cys
2145 2150 2155 2160

Pro Gly Leu Glu Pro Ser Trp Ala Lys Asp Pro Pro Glu Thr Arg Ser
2165 2170 2175

Ser Leu Glu Leu Asp Thr Glu Leu Ser Trp Ile Ser Gly Asp Leu Leu
2180 2185 2190

Pro Ser Ser Gln Glu Glu Pro Leu Ser Pro Arg Asp Leu Lys Lys Cys
2195 2200 2205

Tyr Ser Val Glu Thr Gln Ser Cys Arg Arg Arg Pro Gly Ser Trp Leu
2210 2215 2220

Asp Glu Gln Arg Arg His Ser Ile Ala Val Ser Cys Leu Asp Ser Gly
2225 2230 2235 2240

Ser Gln Pro Arg Leu Cys Pro Ser Pro Ser Ser Leu Gly Gly Gln Pro
2245 2250 2255

Leu Gly Gly Pro Gly Ser Arg Pro Lys Lys Lys Leu Ser Pro Pro Ser
2260 2265 2270

Ile Ser Ile Asp Pro Pro Glu Ser Gln Gly Ser Arg Pro Pro Cys Ser
2275 2280 2285

Pro Gly Val Cys Leu Arg Arg Arg Ala Pro Ala Ser Asp Ser Lys Asp
2290 2295 2300

Pro Ser Val Ser Ser Pro Leu Asp Ser Thr Ala Ala Ser Pro Ser Pro
2305 2310 2315 2320

Lys Lys Asp Thr Leu Ser Leu Ser Gly Leu Ser Ser Asp Pro Thr Asp
2325 2330 2335

Met Asp Pro Val Leu Pro Thr Leu Pro His His Leu Ser Pro Pro Gly
2340 2345 2350

Ala Asp Pro Ser Ser Ala Ser Trp Ala Ala Phe Leu Lys Ser Pro Thr
2355 2360 2365

Ala Ala Ser Ser His Glu Ala Pro His Leu Pro Ser Ser Val Ala Gly
2370 2375 2380

a' cont.

Gly Asp Asp Glu Gln Asn Phe Arg Arg Val Asp Leu Lys Arg Thr Gln
2385 2390 2395 2400

Pro Trp Ser Pro Cys Leu Arg Glu Glu Gly Lys Gly Glu Ser Pro Val
2405 2410 2415

Trp Pro Arg Leu Pro Thr Pro Gly Ala
2420 2425

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<211> 7
<212> PRT
<213> Rattus sp.

<400> 5
Ser Lys Glu Lys Gln Met Ala
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<210> 6
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer Sequence

<400> 6
tngchatgga gmgnccy 17

<210> 7
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer Sequence

<400> 7
cttbcccttg aasarctg 18

<210> 8
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer Sequence

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<210> 9
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
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<210> 10
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer Sequence

<400> 10
gaagatgcga gtggacag 18

<210> 11
<211> 18
<212> DNA
<213> Artificial Sequence

a' cont

<220>
<223> Description of Artificial Sequence: Primer Sequence

<400> 11
ctgtggcgat ggtcactg 18